

Essex
Speed Management
Strategy



Foreword



Cllr Norman Hume
Cabinet Member for
Highways & Transportation

Through EssexWorks, Essex County Council has a programme to deliver the best quality of life in Britain and secure the future of our County. The Essex Speed Management Strategy will assist in the delivery of EssexWorks for a better quality of life by making communities safer, protecting the environment and most importantly in putting our customers first.



Paul Bird
Acting Director for Development,
Highways & Transportation

This strategy sets out the tools for managing speed in Essex and identifies the process for undertaking the Speed Management Review.

Introduction

Following the publication of the Department for Transport's Circular 01/2006 (DfT Circular 01/2006) New Guidance on Setting Local Speed Limits and the subsequent DfT Circular 02/2006 Speed Assessment Framework (Balancing safety and mobility objectives on rural single carriageway roads) Essex County Council undertook to review and update the Speed Management Strategy in light of the new guidance. A key objective of circular 02/2006 is balancing the need to travel with the need to improve the quality of life. This has required a speed policy that will take account of the contribution of appropriate travel speeds to environmental and social objectives as well as to road safety at a national and local level. Both circulars place an even greater emphasis on consistent and coherent speed management to encourage driver compliance and to seek to reinforce the driver's assessment of the safe speed to travel, facilitating an improved quality of life for local communities and a better balance between road safety, accessibility, and environmental objectives, especially in rural communities. This policy document is building upon both Circulars and will update our policies on setting speed limits

It will update our procedures on setting speed limits on the network and provide practical guidance on managing speed for our staff to utilise on the ground and most importantly it recognises the importance of taking into account the views of local citizens in determining an appropriate limit for their community.

Implementation Guidelines

For the purpose of implementing the strategy the following will be applied

- Determining Urban or Rural

“urban” means built up, a common-sense approach would be desirable. A definition based from the 1991 Office of the Deputy Prime Minister details Urban Roads as Major and Minor roads within an urban area with a population of 10 thousand or more. It may relate to roads in towns or in villages and does not necessarily relate to the existence of a 30mph speed limit.

“rural” means not built up

- Essex Functional Route Hierarchy Priority Routes 1 & 2

DfT circular 01/2006 requires that all Traffic Authorities review the speed limits on all of their A and B roads and implement any necessary changes by 2011 in accordance with the guidance given. Essex has adopted a Functional Route Hierarchy as detailed in The Traffic Management Strategy adopted by the County Council in 2005 where the routes are divided into County and Local.

The County Routes provide the main traffic distribution function in any area and give priority to motorised road users. The Traffic Management Strategy splits County Routes into Priority 1 and Priority 2.

- Priority 1 County Routes may be inter-urban or connecting routes, radial feeder or town centre access routes. What is important is the need to maintain free flowing traffic movement on them due to the function they perform within the network.
- Priority 2 County Routes are all those County Routes which do not fall into the Priority 1 category.

All A and B roads fall in to the Priority 1 or 2 category but not all Priority 1 or 2 routes are A or B roads.

For the purpose of complying with DfT circular 01/2006 the Authority will review its speed limits on all Priority 1 and 2 routes.

- Using Mean Average Speed Data instead of the 85th percentile

Following the publication of the Department for Transport's Circular Roads 01/2006, mean average speed data **must** be used as the basis for determining local speed limits. This is a change from the directive for the use of 85th percentile speeds in the Department for Transport's Circular Roads 01/93. The use of mean average speeds is underpinned by extensive research demonstrating the well proven relationship between speed and accident frequency and severity. Mean average speeds also reflect what the majority of drivers perceive as an appropriate speed to be driven for the road, and are felt to be easier for road users themselves to understand. The Department for Transport's advice is that:

“The aim should be to align the local speed limit so that the original mean speed driven on the road is at or below the new posted speed limit for that road.”

For most roads there is a consistent relationship between mean average speed and 85th percentile speed. Where there is not, it may indicate that drivers have difficulty in deciding the appropriate speed for the road, and a better match between road design and speed limit is required; or it may be that targeted enforcement of the existing speed limit will close the gap. The 85th percentile speed will still be examined in each case and where necessary additional measures will be considered to reduce the difference between mean average and 85th percentile speeds.

- Local Community involvement

Following a site investigation the Local Council will be informed and consulted on the findings. If necessary a site visit with a limited number of invited representatives may be arranged to undertake an assessment e.g. number of properties, siting of terminal points, traffic generators etc. It is also useful for the assessors to have current collision information (available from the Safety Engineering Team at County Hall) and any previous history in relation to the request for this meeting.

- Length of Speed Limit

Priority 1 & 2 County Routes may be inter-urban or connecting routes, radial feeder or town centre access routes. It is important to maintain free flowing traffic movement on them due to the function they perform within the network. Therefore, speed limits will need to be consistent along the route so that similar environments are treated in the same way and new limits should not result in too many changes in limit for the driver. Circular 01/2006

recommends minimum speed limit lengths of 600 metres; the County Council follows that guidance with the exception of village speed limits as set out below.

- Street Lighting

The installation of a system of street lighting (≥3 lamps spaced <183 metres apart) on roads without a speed limit order automatically introduces a 30mph speed limit. Whether a 30mph speed limit is appropriate for the road in light of its status in the Functional Route Hierarchy must be assessed. If it is not appropriate, a speed limit order will need to be promoted to set the limit at an appropriate level before light installation.

- New Roads & New Junctions

Any new road (including all roads in new estates) must be assigned a status within Essex County Council's Functional Route Hierarchy and the design must therefore reflect that status.

For the junction of a new access road with an existing road, visibility design standards must be in accordance with the current speed limit on the existing road. If a reduced limit is required on the existing road it must be in accordance with this strategy and policy and implemented prior to any approvals being given for the junction design.

A Speed Limit Order (or suitable restricted or derestricted road status) should be in place prior to any road being adopted by the highway authority and any physical measures necessary to support the limit must be in accordance with ECC guidance and current legislation. Ideally, the speed limit should be set before the road is open to traffic or as soon as possible thereafter.

- Further Guidance

If further clarification is needed, please refer to DfT Circular 01/2006 or contact the Traffic Management Policy Team at County Hall.

Speed Limits in Urban Areas

The following table is an extract from Circular 1/2006, setting the expectations of where drivers would experience different speed limits.

Speed limit (mph)	Characteristics
20	In town centres, residential areas and in the vicinity of schools where there is a high presence of vulnerable road users.
30	The standard limit in built-up areas with development on both sides of the road.
40	<p>Higher quality suburban roads or those on the outskirts of urban areas where there is little development. Should be few vulnerable road users.</p> <p>Should have good width and layout, parking and waiting restrictions in operation, and buildings set back from the road.</p> <p>Should wherever possible cater for the needs of non-motorised users through segregation of road space, and have adequate footways and crossing places.</p>
50	<p>Usually most suited to special roads, dual carriageway ring or radial routes or bypasses which have become partially built up.</p> <p>Should be little or no roadside development.</p>

20mph Speed Limits & Zones



Key Points

- 20mph speed limits and zones are not permitted on County Routes (PR1 &2) under this policy
- 20mph zones or speed limits may be considered as part of the Traffic Management Plan for the district in areas where a high volume of non-motorised road users may be expected, such as, in a residential area, near a school, near a local shopping area, or in special environments where the character of the carriageway and use of the area demands a reduction in speed. Such zones may only be considered if;
 - the proposal has the support of the local community, Parish or Town council, District councillor(s), County Councillor and the Police
 - the reinforcement of an existing 30mph limit by the Police or the provision of engineering measures would not address the problem
 - there are suitable locations for introducing any necessary traffic calming measures
- and (for zones only) viable alternative routes for through traffic are available at the entry points to the zone
- and (for speed limits only) the existing mean average speed is 24mph or under, suggesting that a self-enforcing 20mph restriction is achievable.
- Repeater signs are not permitted within a 20mph zone.
- According to The Highways (Road Humps) Regulations 1999, normal road hump signs and illumination are not required within a 20mph zone.

Before any 20mph zone or speed limit proposal is formally advertised for existing roads, it must be approved for consultation by the Cabinet Member with responsibility for Highways and Transportation by means of an Executive Decision Form (EDF) in consultation with the Director for Development, Highways and Transportation. Where the proposal is for a new estate road an EDF will not be required, the COA should clearly state that it is a new road.

Guidelines on the Implementation of 20mph Zones and Limits

Identification of 20mph zones and limits

Areas attracting high numbers of non-motorised users may require low speed limits for safety or amenity reasons.

As 20mph zones are permitted only on the local road network it is unlikely that zones will be expected to provide a route for through traffic. However, the introduction of the zone could displace traffic, therefore the impact of any potential increase in traffic flow along the alternative routes for through traffic and its effect on the residents and the immediate environment should also be considered.

Careful consideration needs to be given to the methods adopted to reduce and manage speed within 20mph zones, and further advice is given in the section on traffic calming within this document. Road humps or cushions should only be considered after all other traffic calming options have been investigated, and will require formal consultation with residents, and road users.

Zone Features

Each entry point to the zone should make it clear that the driver is entering a different environment, and encourage a change in driving behaviour. 20mph zone signs are to be clearly displayed at the entry point.

Where visibility and road width allows, the signs will be deployed on both sides of the road in accordance with The Traffic Signs Regulations and General Directions 2002 and its subsequent amendments or replacement.

Each exit from the zone must display the speed limit in place on the adjoining road. Where visibility and road width allows, the signs will be deployed on both sides of the road.

The carriageway may be narrowed at the entry point to the zone by means of build-outs or road markings. Where the road width is insufficient to allow further narrowing and it is felt that a strong entry statement is required, a flat top table or some form of surfacing may be considered. The design (and materials) are to take account of the needs of non-motorised and two wheeled road users. Because of maintenance implications, materials other than block paviers are preferred.

20mph zones are to contain measures as defined in the Highways (Traffic Calming) Regulations 1999 such that no point within the zone is more than 50 metres from any such measure.

Statutory Processes -Traffic Regulation Orders (TRO's)

TRO's may be used to contribute to traffic calming design, for example, where kerb space is obviously at a premium for parking. The appropriate use of parking restrictions could be required to allow the large vehicles to be correctly aligned as they go over the cushion. Alternatively, bollards may be introduced on the footway to prevent parking within 20m of the cushion. On bus routes, cushions are to be used in preference to road humps to facilitate the comfortable progression of wider wheel-base vehicles through residential areas.

Consultation

It is important to obtain the support of the local community before advertising a 20 mph limit. Ideally the support of the Parish, Town, District/Borough and County Councillor as well as that of Essex Police should be obtained. However this does not preclude a decision being taken by the Cabinet Member with responsibility for Highways and Transportation in consultation with the Director for Development, Highways and Transportation to proceed with the introduction of a limit.

In addition to the statutory consultation process full consultations with the local community are to take place prior to the formal process. This should involve a 'real planning' event held in a local venue to gather the opinions of the residents and other users of the area to help pinpoint perceived problem areas within the proposed zone. Further events should be held as necessary, once a draft design has been produced. (See also the section on traffic calming).

Once a preliminary design has been drawn up showing the size, type and position of any proposed physical measures, informal consultation may begin. Informal consultations (see also Road Hump consultation section) are to take place to ensure that the proposal is supported before the Cabinet Member is informed. The Executive Decision Form (EDF) needs to include the following:

- a plan of the zone;
- the size, type and position of any physical measures;
- the collision data;
- the results of the 'before' speed and volume survey;

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- the responses from all the informal consultees including the collated results of the real planning exercise;
 - the expected costs and desired outcome of the scheme;
 - details of possible effects on any alternative routes.

30mph Speed Limits

30mph is the default speed limit in urban areas. This is usually due to the provision of street lighting, or applied by Speed Limit Order (see signing of Speed Limits).

40 & 50mph Speed Limits

Roads suitable for 40 mph are generally higher quality suburban roads e.g. PR1 & Pr2 County Routes or those on the outskirts of urban areas where there is little development. They should have good width and layout, parking and waiting restrictions in operation, and buildings set back from the road. These roads should, wherever possible, cater for the needs of non-motorised road users through segregation of road space. Alternatively, we should consider whether there are convenient alternative routes available and ensure that any roads with a 40 mph limit have adequate footways and crossing places as necessary for pedestrians, cyclists and equestrians.

A 50 mph limit may also be used on higher quality roads where there is little or no roadside development. The roads most suited to these higher urban limits are special roads (as defined in the Road Traffic Regulation Act 1984) or those such as primary distributors with segregated junctions and pedestrian facilities. They are usually dual carriageway ring or radial routes or bypasses which have become partially built up. Consideration should, however, be given to the potential impact upon the local community and non-motorised road users before considering such a limit.

Speed Limits in Rural Areas

Whilst the majority of the rural road network is subject to a 60mph speed limit the majority of drivers do not reach such a speed due to the characteristics of the road network. Contrastingly a significant proportion of casualties occur on the rural road network and traffic speed or perception of speed is often stated as responsible for severing local communities.



The following is an extract from Circular 1/2006 summarising recommended speed limits for rural single carriageway roads to which traffic authorities are encouraged to move in the upcoming years. The recommended hierarchy of upper & lower tier roads accords with ECC's County and Local roads classification.

Speed limit (mph)	Upper tier – roads with predominant traffic flow function County Roads	Lower tier – roads with important access and recreational function Local Roads
60	<p>Recommended for most high quality strategic A and B roads with few bends, junctions or accesses.</p> <p>When the assessment framework is being used, the accident rate should be below a threshold of 35 injury accidents per 100 million vehicle kilometres with this speed limit.</p>	<p>Recommended only for the best quality C and Unclassified roads with a mixed (i.e. partial traffic flow) function with few bends, junctions or accesses.</p> <p>In the longer term, these roads should be assessed against upper tier criteria.</p>
50	<p>Should be considered for lower quality A and B roads which may have a relatively high number of bends, junctions or accesses.</p> <p>When the assessment framework is being used, the accident rates should be above a threshold of 35 injury accidents per 100 million vehicle kilometres at higher speeds. Can also be considered where mean average speeds are below 50mph, so lower limit does not interfere with traffic flow.</p>	<p>Should be considered for lower quality C and Unclassified roads with a mixed function where there are a relatively high number of bends, junctions or accesses.</p> <p>When the assessment framework is being used, the accident rate should be below a threshold of 60 injury accidents per 100 million vehicle kilometres.</p>
40	<p>Should be considered where there is a high number of bends, junctions or accesses, substantial development, where there is a strong environmental or landscape reason, or where there are considerable numbers of vulnerable road users.</p>	<p>Should be considered for roads with a predominantly local, access or recreational function, or if it forms part of a recommended route for vulnerable road users.</p> <p>When the assessment framework is being used, the accident rate should be above a threshold of 60 injury accidents per 100 million vehicle kilometres.</p>
30	Should be the norm in villages	

Village Speed Limits

As it says above we should be moving towards a standard speed limit of 30mph in villages. Traffic Advisory Leaflet 01/04 defines a village as being 20 or more houses and a minimum length of 600 metres. Essex County Council has relaxed these requirements to the following

- 11 or more properties to include houses, shops, a church or school, village hall or public house (traffic generators) etc

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- Minimum length of 350 metres

It is suggested that the terminal points of a village speed limit are sited to give a clear visual message to drivers that they are entering the village for example within sight of the first property or by using a gateway feature near to the start of the development (see signing of speed limits).

Intermediate Speed Limits (Buffers)

Where there are outlying houses beyond the village boundary or high approach speeds to the village an intermediate speed limit may be appropriate. The use of such limits should be restricted to sections where immediate speed reduction causes the driver difficulty or would have minimal effect well into the extent of the lower limit. In the case of high approach speeds other speed management measures (Vehicle Activated Signs (VAS) within the village limit, centre hatching or other physical measures to change the appearance of the road) may be more appropriate to encourage compliance with the village limit.

Use of the Speed Management Assessment Framework (SMAF)

Circular 1/2006 states that the road function, characteristics and environment and actual speeds being driven should be sufficient to enable the traffic authority to determine the speed limit on single carriageway rural roads.

In order to assist in determining the appropriate speed limit the Transport Research Laboratory produced a spreadsheet for the DfT known as the Speed Management Assessment Framework or SMAF. The spreadsheet evaluates the possible consequences of changing speed limit on a single carriageway rural road and where there are conflicting requirements between safety and mobility the SMAF can be used.

It should be emphasized that the SMAF will only give certain available options and cannot be changed; a request for 40mph for an upper tier road cannot be assessed using the SMAF as it is not an available option. DfT guidance for such a situation is that such a site would have a high accident rate (> 35 injury accidents per 100 million vehicle km) or be indicated by local knowledge of the site.

The SMAF introduced by TAL 2/06 can be located at:-

<http://www.trl.co.uk/content/download.asp?pid=87> and whilst useful in comparing benefits of borderline decisions it may be of limited application.

Variable Speed Limits

Key Points

- Essex County Council will consider a Variable Speed Limit where:
 - the proposal has the support of the local community, Parish or Town Council, District Councillor(s), local County Councillor and the Police,
 - the reinforcement of the existing limit by the Police or the provision of engineering measures would not address the problem,
 - the proposed site is in an area where a high volume of vulnerable non-motorised road users may be expected at specific times e.g. outside a school or along the route of a walking bus,
 - lowering the existing speed limit on a permanent basis would not obtain compliance for the majority of the day because drivers of motorised vehicles would be unlikely to understand the need for the limit at quieter times,
 - Essex County Council's Traffic Manager has approved the location (having assessed potential implications for congestion),
 - It does not reduce the speed limit on County Routes to below 30mph, and
 - The scheme is designed to manage traffic flows as part of a congestion relief strategy for a route.
- Any variable speed limit should:
 - Be signed in accordance with TSR & GD
 - have a maximum of two operational periods during the day, each period being a maximum of 90 minutes,
 - have a maximum length of 200m.
 - be designed such that no repeater signs are necessary.
 - be monitored and reviewed after six months and annually thereafter, including collision data.

Guidelines on the Use of Permanent Variable Speed Limits

Variable Speed Limits are to be signed using Variable Message Signs (VMS). Due to the cost of the signs, schemes are to be designed such that variable repeaters are not required. Static repeaters for the higher limit are to be moved if they fall within the proposed variable limit, although statutory minimum distances are to be maintained.

They must be signed in accordance with TSR&GD using variable message signs with 600mm diameter roundel accompanied by twin sets of flashing amber lights (operational when the lower limit is in force). The near-side sign will remain blank when not displaying the lower limit whilst the off-side sign may display a speed limit repeater sign during the operation of the higher limit, (provided that the higher limit is not a 30mph limit with street lighting).

The signs must be installed by our partnering contractor for Traffic Control Information Systems and a maintenance and monitoring agreement is to be in place before the signs become operational.

Process

Once a preliminary design has been drawn up showing the size, type and position of any proposed physical measures, thorough informal consultations are to take place to ensure that the proposal is supported and viable before it is put forward to the Cabinet Member with responsibility for Highways & Transportation for approval to formally consult. The EDF has to include, over and above the usual requirements.

1. a plan showing the full extent of the variable speed limit, the position and design of the VMS and the size, type and position of any accompanying physical measures;
2. the results of the 'before' speed and volume survey (including the results of any 'before' and 'after' speed and volume surveys in respect of previous engineering measures employed at the site);
3. the collision data;
4. the responses from all the informal consultees; and
5. the costs and desired outcome of the scheme.

Technical Guidance - Permanent Variable Speed Limits	
Use on County Routes/Local Roads	All roads (but limit may not be below 30mph on County Routes)
May be used as an individual measure	Yes
Traffic Regulation/Speed Limit Order (SLO) needed	Yes. SLO (AND Secretary of State consent needed unless on a Principal Road or the limit is varied to 20mph).
LCC/DC/PC support needed	Yes
Consultation (over and above statutory requirements) required	No
EDF required	No
Monitoring	Speeds after 6 months of operation and annually thereafter. Copies of 'before' and 'after' data for completed variable limit schemes are to be supplied to DfT via County Hall.
Lighting	Each VMS entry sign is to be accompanied by twin sets of flashing amber lights
Regulations	TSR&GD 2002 Reg. 58 for signs. Signs are to be DfT 'type approved'
TSR&GD diag.nos.	670
Safety Audit/Assessment required	Yes
Further information	<p>Only the lower speed limit will be displayed on the near-side sign. The offside sign may also display a reminder roundel during the periods of the higher speed limit unless the higher limit is a street-lit 30mph restriction.</p> <p>If under RTRA 1984 section 84 (1)(b) as amended are to have DfT approval unless on a Principal Road or a 20mph limit.</p>

Home Zones

- Essex County Council supports the introduction of Home Zones in any new development and in existing residential communities on Local Roads only, where:
 - There is a high level of community support and regeneration is required to improve the local environment or social space or to reduce accidents to non-motorised road users and
 - Traffic flows are very low.

Guidelines on the Use of Home Zones

Under section 268 (7) of the Transport Act 2000, a local authority may designate any road, for which it is the traffic authority, as a Home Zone.

The aim of Home Zones is to improve the quality of life in residential areas by making them places for people rather than just a thoroughfare for cars. The key elements to a successful Home Zone are:

- community involvement to encourage a change in user behaviour (in retro-fit zones);
- road design to encourage a new range of activities and slow speeds;
- no/little through traffic.

The Home Zone concept is easiest to implement as the residential area is designed and built. This is fully supported by the County Council through our policies for 'new build' projects (see Essex Design Guide 2005 and Urban Place Supplement 2007). The SMS s concerned mainly with any Home Zones that are required to be 'retro-fitted' i.e. implemented in existing residential areas.

Home Zones require strong community support and involvement so that the area is designed to meet the needs of the community. This high level of community involvement requires high levels of local authority officer involvement from a variety of disciplines and organisations, and is therefore a project that is likely to be implemented and funded through a joint project team. The Service Director for Development and Transportation will consider any requests for

involvement in a joint project team led by another department, or for the planning and highways department to develop and lead a project team, individually.

Further information on Home Zones may be found in the Manual for Streets (Department of Transport) section 7.2.16.

Signing of Speed Limits

Policy checklist

- Yellow Backing Boards may be used only as part of a Casualty Reduction Scheme design.
- Grey backing boards can be used to increase conspicuousness of sign in line with TSR&GD.
- Painted speed limit roundels must not be placed on coloured surfacing.
- Signing for Safety Cameras will only be determined through the Safety Camera Working Group.
- Speed Limit Countdown markers require Department for Transport approval.

Guidelines on the Signing of Speed Limits

Illumination

The current Traffic Signs Regulations and General Directions (TSR&GD) provides details of illumination standards for all signs that require lighting.

Repeater Signs

The current TSR&GD does not permit the use of repeater signs on street-lit 30mph limits or within 20mph zones. The Department for Transport's Traffic Advisory Leaflet 01/95 – Speed Limit Signs gives guidance on the appropriate size and frequency of repeater signs for each standard speed restriction and the distances given should be considered to be the maximum distance for use with repeaters.

Painted Roundels

In accordance with the current TSR&GD, roundels painted on the carriageway are to be placed in conjunction with an upright terminal or repeater sign and may not therefore be used in a street-lit 30mph limit. They are not to be placed on coloured surfacing due to the maintenance requirements this creates.

Countdown Markers

The use of countdown markers on the approach to a reduced speed limit requires approval from the Department for Transport. The DfT consider them only appropriate in very rare circumstances and suggest that consideration in the first instance should be given to the placement of the terminal signs to negate the need to consider countdown markers.

To gain approval the following are to be provided:

- evidence of insurmountable visibility problems at the site. This should include photographic evidence;
- evidence of other steps taken to make existing signs more visible - the removal of vegetation, repositioning the terminal signs, and so on;
- evidence showing that the use of countdown markers is supported by the police.

Traffic Calming Measures for Speed Management

The Highways (Traffic Calming) Regulations 1999 (SI 1999 No.1026) provide a range of measures such as build-outs, pinch-points and chicanes, islands, rumble devices, overrun areas, and gateways, within 20mph zones. These features are placed so that at no point in the zone would a person be more than 50 metres from such a measure.

Physical measures each have their own drawbacks including increased localised noise, visual impact on the street scene, comfort of use and impact on disability access groups and other facilities such as parking or bus services.



The introduction of physical traffic calming such measures could also displace traffic onto other routes and contribute to speeding/congestion problems.

Area Highway Managers are encouraged to consider non-physical methods of speed reduction in the first instance. These might include:

- vehicle activated speed limit signs;
- Community Speedwatch;

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- Police enforcement;
 - road safety activity provision of additional repeater signs;
 - addition or removal of white lining (removal of centre line if road width under 5.5m);
 - arrangement of parking;
 - review of signing including directional signing.

However, when considering any form of traffic calming for speed reduction, the following should be considered:

- the road's status within the identified Functional Route Hierarchy in order to determine what measures may be used;
- the extent of the scheme and how it would integrate into the surrounding network;
- the type of road and its historical character, including the height of buildings, and so on;
- the road width;
- limiting forward visibility to reproduce the effect of a bend;
- the kerbside activity – parking, cycling, pedestrians;
- the position of any bus stops and the nature of any pedestrian access;
- the existing traffic signs – do they meet current standards? Are they necessary? Is the street scene cluttered?
- the existing white lining.

Coloured Road Surfacing

Essex County Council will not consider the use of Coloured Road Surfacing for Speed Management except in association with a Collision Reduction site

Guidelines on the use of Red Road Surfacing for Speed Management

Due to maintenance implications, the effect on the environment, cost of installation and the limited effect on safety, coloured surfacing is only to be used as part of a scheme of collision remedial measures.



Technical Guidance - Coloured Road Surfacing for Speed Management	
Use on County Routes/Local Roads	Both
May be used as an individual measure	No – only as an ‘add-on’ to gateway if speeds remain high or to highlight a hazard requiring speed reduction.
Traffic Regulation/Speed Limit Order needed	No
LCC/DC/PC support needed	Yes
Direct community support required	
EDF required	No
Monitoring	No
Lighting	No
Regulations	No
TSR&GD diag.nos.	No
Safety assessment required	No
Further information	TAL 11/93 for spacing

Carriageway markings

Dragon's Teeth Markings

Essex County Council will only consider the installation of: **Dragon's Teeth Markings**

- if the proposal has the support of the local community, Parish or Town Council, District Councillor(s) and local County Councillor;
- Only in association with additional measures as they are largely ineffectual when used alone.
- If the Area Highway Manager makes arrangements within existing budgets (including on-going maintenance costs) to install them.

White Lining

Policy checklist

- On rural Local Roads, white centrelines will be installed only as part of a casualty reduction design and area managers are encouraged to identify rural roads where the width is less than 5.5m where they can determine that the centre lines will not be maintained.
- Edge hatching (at the kerbside) will not be used except in association with kerbside build outs where it is considered necessary.

Painted Speed Limit Roundels in Carriageway

Essex County Council will consider the installation of: **Painted Speed Limit Roundels in Carriageway**

- adjacent to other measures but not on top of coloured surfacing;
- in accordance with current DfT Guidance.

Technical Guidance -			
	Dragon's Teeth Markings	Painted Speed limit roundels in carriageway	White lining for Speed management
Use on County Routes/Local Roads	Both	Both	Both
May be used as an individual measure	No – only as an 'add-on' to gateways if speeds remain high	No - only to enhance upright repeater signs, cannot therefore be used in street-lit 20 and 30mph limits except at gateways.	Yes
TRO/SLO needed	No	No	No
LCC/DC/PC support needed	Yes	Yes	No
EDF required	No	No	No
Monitoring	No	No	No
Lighting	No	Made of reflective material (as below)	No
Regulations	Not contained within TSR&GD 2002 as not considered as traffic sign. DfT authorisation not required.	Regs 31 (1) Direction 7, 18(1) for upright signs	Made of reflective material
TSR&GD diag.nos.	None	1065	TSR&GD 2002
Safety assessment required	No	No	Yes, various - see schedule 6
Further information	For use as a gateway feature TAL 1/04 TAL 1/00	Painted roundels must not be installed on top of any coloured surfacing. Traffic Signs Manual - Road Markings Chap 5 - 21.4 - 21.6	No, unless removing centre lining from roads less than 5.5m

Guidelines for the Use of White Lining for Speed Management

Central white lining should not be installed on any road less than 5.5 metres wide (Traffic Signs Manual Chapter 5 table 4-1). Without a centre line, and particularly if edge lines are used, the road will appear narrower. If drivers have no defined area of carriageway that is ‘their half’ it is likely that they will slow down to reduce their perceived risk of a collision. This could be particularly beneficial for speed reduction in rural areas and will reduce maintenance costs whilst enhancing the natural rural environment.

Existing central white lining will not be maintained unless it forms part of a specified casualty reduction scheme. The removal of central, and other, white lining for speed reduction or rural enhancement on County Routes or on urban local roads less than 5.5m wide, is encouraged but the reasons for removal are to be documented and a safety assessment to be undertaken.

Edge lining makes the road appear narrower by reducing the apparent available carriageway width. Edge lining should be used on most rural local roads, particularly where the centre line has been removed, and in order to protect the “haunches” the . In urban areas edge markings are to be used in preference to central hatching in order to create kerb-side space for cyclists. Space between any edge of carriageway marking and the physical carriageway edge should not be hatched.

Edge lining may also be used to enhance a gateway by visually narrowing the carriageway.

Central hatching may be used on bends, particularly where the camber of the road brings the tops of large vehicles into close proximity, or where it is important to keep traffic streams apart. Where there is no central line on a bend, kicker arrows should be considered to alert the driver to the need to remain on their side of the carriageway.



Physical Measures

Build-Outs

Essex County Council will consider the installation of **build-outs**:

- where parking and cyclists may be accommodated and congestion is not likely to occur;
- where any concerns from frontagers and bus providers have been resolved
- unless specifically designed in association with pedestrian crossing facilities, the design includes a physically protected cycle bypass lane at least 1.5 metres wide (a minimum width of 1 metre may be permitted);

or

- if this is not achievable, an unprotected cycle lane of over 1.5 metres;

or

- if this is not achievable a maximum running lane width of 3.0 metres.

Guidelines for the use of Carriageway Narrowing

Narrowing the carriageway may have many benefits, as drivers' perception of the safe speed for the road is affected by road width. This could facilitate pedestrian movements, although cyclists can be vulnerable where reduced road width brings them into close contact with motorised vehicles that might try to pass them. (See reference 'Designing for Cyclists')

The carriageway may be narrowed from the edges in the form of build-outs to guide vehicles towards the centre of the road, or from the centre of the road in the form of central refuges or islands, to guide vehicles away from the centre line towards the kerb.

A **build-out** is a feature constructed on one side of the carriageway to restrict road width. Build-outs may be installed:

- on one side of the carriageway only;
- on opposite sides of the carriageway, in pairs, to create pinch points;
- on alternate sides of the carriageway, to create a chicane.

Buildouts are used to reduce speed by narrowing the road to a single lane width forcing traffic to give way – **priority working**.



- Reduces traffic speeds
- Can provide safer crossing points for pedestrians
- Can be used as part of Gateway features
- Need opposing traffic to keep speeds low and to have clear visibility of the opposing traffic stream
- Need to ensure that HGV's/buses and emergency vehicles can be safely accommodated
- Provision for cyclists to be maintained
- May cause congestion

Technical Guidance - Build-Outs	
Use on County Routes/Local Roads	Both
May be used as an individual measure	Yes, but would usually form part of a bigger scheme
TRO/SLO needed	No – although parking restrictions may be necessary to maintain access to cycle facility.
LCC/DC/PC support needed	No
Consultation (over and above statutory requirements) required	Yes, with affected frontagers, especially if loss of parking, and bus companies if on a bus route. Consult the Traffic Manager if a County Route
EDF required	No
Monitoring	No
Lighting	Not essential for the build-out but signs (Diag.610) will require lighting if within 50metres of street lighting
Regulations	Highways (Traffic Calming) Regulations 1999
TSR&GD diag.nos.	1040.4, 1040 & 610
Safety assessment required	Yes
Further information	Traffic Signs Manual Ch 5 - 21.18–21.21 Traffic Advisory Leaflets 7/93, 12/97 Consider conspicuity at night and in snow/poor weather conditions.

Central Islands/Refuges

Policy checklist

- Essex County Council will consider the installation of **central islands/refuges** on all roads where:
 - the island/refuge does not obstruct access to individual properties;
 - the island/refuge is not within 20 metres of an on-carriageway bus stop; and
 - the design includes a physically protected cycle bypass lane at least 1.5 metres wide (in exceptional circumstances a minimum width of 1 metre may be permitted);

or

- if this is not achievable, an unprotected cycle lane of between 1.0 metre and 1.5 metres;

or

- on a carriageway restricted to 30mph or less, the width of the narrowed lane must be no more than 3.0 metres;
- on a carriageway restricted to 40mph or above, the width of the narrowed lane must be greater than 3.9 metres.

Guidelines on the Use of Central Refuges and Islands

Central refuges and islands both have the effect of narrowing the carriageway and reducing vehicles speeds, but they are installed for different purposes and under different legislation. Islands are created under the Highways (Traffic Calming) Regulations 1999 and are not intended for pedestrian use, but may be used to protect cycle facilities or to separate traffic streams and prevent overtaking. Refuges are designed to improve pedestrian safety on wide roads by providing a central crossing point, thereby allowing pedestrians to cross each side of the road separately. They will include dropped kerbs and tactile paving to facilitate pedestrian use.

It is not essential to have central hatching on the approach to islands or refuges. A single white line leading from the centre line of the road to the offside of the refuge (thereby 'leading' the driver's eyes towards the narrower lane) can be far more effective (see Chap. 5, P.17 Fig.4-4).

Technical Guidance - Central Refuges and Islands	
Use on County Routes/Local Roads	All roads
May be used as an individual measure	Yes
TRO/SLO needed	No, although parking restrictions may be required to prevent parking within 20metres of the island/refuge
LCC/DC/PC support needed	No
Consultation (over and above statutory requirements) required	Yes, with affected frontagers, especially if loss of parking (see Appendix 3 and 4).
EDF required	No
Monitoring	No
Lighting	At least one diag.610 are to be lit if within 50metres of street lighting.
Regulations	Highways (Traffic Calming) Regulations 1999 for islands. Highways Act 1980 – Section 68 for refuges.
TSR&GD diag.nos.	610. See also Chap.5 Fig 4-4 on P.17
Safety assessment required	Yes
Further information	Traffic Advisory Leaflet 7/93

Road Humps and Cushions

- Essex County Council will implement **road humps** as a last resort after all other measures have been considered and only:

- on urban Local Roads; and
- to a maximum height of 75mm;

unless;

- they are required to be flush with the kerb to provide a pedestrian crossing facility, in which case they may be a maximum of 100 mm high.

and

- in accordance with The Highways (Road Hump) Regulations 1999.
 - where necessary, speed cushions may be supported by Traffic Regulation Orders which prevent parking within 20 metres of each feature.
- Essex County Council will only accept Development Control Schemes on existing roads where they comply with this policy document and subject to the Statutory Notice process.
 - Development Control schemes on new roads must be in accordance with current regulations or have specific authorisation from the DfT obtained by the County Council before the road is adopted.

Guidance on the Use of Road Humps and Cushions

Road humps and speed cushions are effective methods of achieving sustained speed reduction. However, they often attract criticism for perceived noise or discomfort and must be carefully placed to achieve maximum effectiveness and maximum public acceptance. Road humps and cushions should be the last option after all other traffic calming measures have been considered.

The design of any traffic calming scheme should, therefore, take into account any similar measures on the surrounding network and should examine any affected bus route in its entirety.

While cushions allow greater access for bus services, they are also easy for some smaller vehicles to negotiate without slowing down. Full width humps are more effective and therefore cushions should be used with extreme caution and only where absolutely necessary.

Designers should give consideration to:

- drainage of the carriageway surface around humps;
- the choice of materials - bituminous material is preferred for safety and maintenance reasons;
- the spacing between each feature – a minimum of 60-80 metres is recommended;
- the location and nature of each feature within the streetscape ;
- displaced traffic and the effect on surrounding streets;

Consultation

Full consultation with the local community must take place as they must be made aware of any negative impacts that a scheme comprising physical measures might have. This may include noise, discomfort or exclusion for certain user groups, including local disability/access groups, loss of parking in some instances and changes to the visual environment. If road humps are used within a scheme, all physical measures within the scheme will be subject to both informal and formal consultation.

It is also important to consult with public and school bus operators from an early stage, as it could be necessary for bus stops to be moved to accommodate the scheme. Public and school bus operators affected by any scheme are to provide written agreement to the scheme. If agreement might not be reached, the community and ultimately the Cabinet Member with responsibility for Highways and Transportation will have to consider whether the advantages of the scheme outweigh the possible loss of a bus service.

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Technical Guidance - Road Humps and Cushions	
Use on County Routes/Local Roads	Urban Local Roads only
May be used as an individual measure	No, must form part of a scheme in accordance with the regulations
TRO/SLO needed	No
LCC/DC/PC support needed	Yes
Consultation (over and above statutory requirements) required	Yes, local disabled/access groups/Options for Independent Living Transport Group (via Passenger Transport) & bus companies including school bus providers, at informal stage (see Appendix 3 and 4).
EDF required	No
Monitoring	Yes – before and after speeds and volumes, including any identified alternative routes that may be affected by scheme.
Lighting	Yes, Schedule 17 item 1 (optional in a 20 mph Zone, dependant on individual scheme)
Regulations	Highways (Road Hump) Regulations 1999
TSR&GD diag.nos.	557.1 and 1062 for Road Markings
Safety assessment required	Yes
Further information	<p>Traffic Advisory Leaflet 75mm High Road Humps 2/96</p> <p>Traffic Advisory Leaflet 3/93 – Traffic Calming Special Authorisation</p> <p>Traffic Advisory Leaflet 7/93 – Traffic Calming Regulations</p> <p>Traffic Signs Manual Road Markings Chap 5 - 21.7 – 21.12 Humps) 21.13-21.15 (Cushions)</p> <p>Traffic Signs Manual Warning Signs 2004 Chap 4 - 13.1 – 13.6</p> <p>The Highways (Road Hump) Regulations 1999 (SI 1999 No.1025)</p> <p>DDA 1995 (see ECC Traffic Management Strategy)</p>

Rumblewave Surfacing

Essex County Council will implement Rumblewave Surfacing only:

- if the proposal has the support of the local community, Parish or Town Council, District Councillor(s) and local County Councillor ;
- if a cycle bypass or other suitable feature is part of the design;
- in accordance with current Department of Transport guidance; and
- only in association with additional measures as it is largely ineffectual when used alone.
- The proximity of existing properties and mean average traffic speeds should be considered.

Guidelines on the Use of Rumblewave Surfacing

Technical Guidance - Rumblewave Surfacing	
Use on County Routes/Local Roads	All roads, subject to the mean average speed being below 45mph
May be used as an individual measure	No – to be used to highlight additional features or hazards
TRO/SLO needed	No
LCC/DC/PC support needed	Yes
Consultation (over and above statutory requirements) required	No
EDF required	No
Monitoring	Yes, before and after speed data & any community feedback until further experience is gained.
Lighting	No
Regulations	Highways (Traffic Calming) Regulations 1993
TSR&GD diag.nos.	No signs needed, if desired TSR&GD 883 is recommended
Safety assessment required	Yes
Further information	Traffic Advisory Leaflet - Rumblewave Surfacing 1/05 The Highway (Traffic Calming) Regulations 1993

Vehicle Activated Speed Signs

- Essex County Council will permit the use of permanent, vehicle activated, speed limit reminder signs in accordance with TSR&GD 2002 or with DfT authorisation:
- In accordance with H&T Practice Note 60A dated January 2006
- in association with permanent safety cameras as approved by the Casualty Reduction Board;
- on all roads to reinforce the signed speed limit where:
 - the existing speed limit has been in place for at least 12 months;
 - the mean average speed is more than 5mph above the limit;
 - the proposal has the support of the local community, Town or Parish Council, district councillor(s) and local County Councillor;
 - the sign will be visible to drivers for 50metres and will not be obscured by parking or street furniture; and
 - the sign is more than 70 metres inside an existing speed limit;
 - the signs will be powered by wind/solar power wherever possible;
 - the signs will be erected in accordance with the County Council's passive safety policy (H&T Practice Note 63A).
- Essex County Council will permit the use of Speed Indicator Devices (SIDs) by local communities at approved locations and in accordance with its risk assessments (see Appendix 2).

This policy supersedes H&T Practice Note 60A with regard to Vehicle Activated Speed Signs.

Guidelines for Use of Vehicle Activated Speed Signs

The Vehicle Activated Speed Signs detailed in this policy are not enforceable. They are designed to increase driver awareness of the signed speed limit.

There are other signs available such as ‘Driver Feedback Signs’ which indicate the actual speed of the driver or rider. These are not recommended for use as they may encourage drivers or riders to drive over the limit or at a higher ‘target’ speed.

Technical Guidance - Non-enforceable Vehicle Activated Speed Signs (VAS);		
<ul style="list-style-type: none"> • SID – Speed Indicator Device (i.e. used by police or community on temporary basis to remind drivers of the speed limit). • VAS – Permanent Vehicle Activated Signs (i.e. roundels). 		
	SID	Permanent VAS
Use on County Routes/Local Roads	All roads, subject to risk assessment	All roads
May be used as an individual measure	Yes	Yes
TRO/SLO needed	No	No
LCC/DC/PC support needed	Yes, only Parish support essential	Yes
Monitoring	Yes, as agreed with Town/Parish Council	Yes, 6 months after installation and annually thereafter
Lighting	No	No
Maintenance	Area Office to arrange and fund	
Regulations	TSR&GD 2002 Reg. 58 (6) & (7)	
TSR&GD diag.nos.	670 (600mm diameter only) The legend “SLOW DOWN” may be omitted	
Safety assessment required	Risk assessment by area office	Yes
Further information	Essex Signing Policy Latest Guidance on Passive Safety Traffic Advisory Leaflet 1/03	

Appendices

Appendix 1



The Partnerships

The **Essex Casualty Reduction Board** comprises the following partnership members:

- Essex County Council
- Essex Police
- Highways Agency
- Essex County Fire and Rescue Service
- East of England Ambulance Service

This board oversees all aspects of reducing casualties on the roads. Part of its work is overseeing the Safety Camera Working Group (which also includes the HM Courts Service, Southend on Sea Borough and Thurrock Councils), to achieve the targets for killed and seriously injured casualties (KSIs), and will direct the deployment of mobile and static cameras to maximise their effect on casualty and speed reduction.

The Board will review the enforcement strategy for Essex on a regular basis and will implement changes as appropriate based on the effectiveness of existing camera sites and community feedback.

Further information on the work of the Casualty Reduction Board and safety cameras is available on the web site **www.drivingcasualtiesdown.org**

Essex County Council road safety officers offer an education element to road users stopped for speeding. They support Essex Police in its proactive approach to providing public reassurance where speeding occurs in villages or urban areas which do not meet the camera enforcement criteria and where there may be no record of injury accidents.

Essex County Council Road Safety Engineers use a database of over 10 years worth of collision information to identify sites or lengths of road for treatment with engineering measures. They also safety audit new schemes or changes to the highway to ensure conflicts are not built in the highway.

Community Speedwatch

Community Speedwatch is a traffic monitoring scheme that is co-ordinated by Essex Police but managed and run by volunteers in the community. The aim is to address the problem of real or perceived speeding in partnership with the community in order to reduce the number of injuries from speed related road traffic collisions.

Monitoring of speeds will be undertaken by pairs of volunteers in reflective 'Community Speedwatch' jackets supported by advance warning signs. Their operational logs will be forwarded to the Essex Police Mobile Support Division.

First-time offenders will be sent warning letters by the police. Second and subsequent offences will lead to Police action.

To participate in, or find out more about Community Speedwatch, please contact adam.pipe@essex.pnn.police.uk or Adam Pipe on 01245 240600 x 480527.

‘Make The Commitment’

‘Make the Commitment’ is a community focused anti-speeding campaign led by Essex County Council’s Road Safety Team and supported by Essex County Council Area Highway Managers and Essex Police. It supports the County Council’s long-term aim of making speeding socially unacceptable.

The campaign asks motorists or passengers to make a personal written commitment to drive, or encourage others to drive, at an appropriate speed for the environment and road conditions, and always within the legal speed limit.

Speed Awareness Course

This course was launched in Essex in October 2006 by Essex Police and Essex County Council. It is offered to drivers and riders detected speeding by safety cameras at the ‘lower end’ of the scale and covers the dangers of using excessive or inappropriate speed. On successful completion of the three hour classroom based course for which the offender must pay, they will be exempt from points on their licence and payment of a fine to the courts. On successful completion they will not be eligible for another Speed Awareness Course for a period of 3 years.

Driver Improvement Scheme

Essex County Council is a National Driver Improvement Scheme provider. This educational alternative to prosecution is offered to drivers referred through the criminal justice system who would otherwise be prosecuted for careless driving (which may or may not include speeding). Offending drivers are offered an opportunity to pay for a 1 ½ day course including theory and on-road training as an alternative to paying court costs and incurring points on their licence. The course aims to benefit the drivers in a positive way by improving both their skills and attitude. On successful completion they will not be eligible for another Driver Improvement Course for a period of 3 years.

Appendix 2

Add instruction on process for carrying out the review and time table once approval given

Appendix 3

Add Reference section here

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This booklet is issued by

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The information contained in this document can be translated, and/or made available in alternative formats, on request.

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